IN THE CLAIMS:

1. (Currently Amended) A method for tensioning and positioning a fiber optic cable, comprising:

securing a first portion of the fiber optic cable to a first support;

securing a second portion of the fiber optic cable to a second support, said second support having a curved portion, a radius associated with said curved portion exceeding a minimum bend radius of said fiber optic cable ; and

creating a gravity-assisted moment arm with the second support to uniformly and repeatably tension and position the fiber optic cable between the first and second supports.

2. (Original) A method for tensioning and positioning a fiber optic cable as recited in claim 1, wherein the gravity-assisted moment arm is created by rotating a cam contacting the second support to rotate the second support due to its weight.

3. (Original) A method for tensioning and positioning a fiber optic cable as recited in claim 2, further comprising, prior to securing the first portion of the fiber optic cable, rotating the cam to rotate the second support in a direction opposite to the direction that uniformly and repeatable tensions and positions the fiber optic cable.

4. (Original) A method for tensioning and positioning a fiber optic cable as recited in claim 1, wherein the first portion of the fiber optic cable is secured to the first support with a first clamp.

5. (Original) A method for tensioning and positioning a fiber optic cable as recited in claim 1, wherein the second portion of the fiber optic cable is secured to the second support with a second clamp.

6. (Original) A method for tensioning and positioning a fiber optic cable as recited in claim 2, wherein the second support comprises a rotatable body portion integrally connected to a leg portion, the leg portion contacting the cam to rotate the second support.

7. (Original) A method for tensioning and positioning a fiber optic cable as recited in claim 1, further comprising aligning a glass optical fiber portion of the fiber optic cable with an alignment mechanism provided between the first and second supports.

8. (Currently Amended) A method for forming a refractive-index grating in a fiber optic cable, comprising:

securing a first portion of the fiber optic cable to a first support;

securing a second portion of the fiber optic cable to a second support, said second portion of said fiber optic cable having a curved portion, a radius associated with said curved portion exceeding a bend radius of said fiber optic fiber;

creating a gravity-assisted moment arm with the second support to uniformly and repeatably tension and position the fiber optic cable between the first and second supports; and

etching grating lines in the fiber optic cable after the fiber optic cable has been uniformly and repeatably tensioned and positioned.

9. (Original) A method for forming a refractive-index grating in a fiber optic cable as recited in claim 8, wherein the gravity-assisted moment arm is created by rotating a cam contacting the second support to rotate the second support due to its weight.

10. (Original) A method for forming a refractive-index grating in a fiber optic cable as recited in claim 9, further comprising, prior to securing the first portion of the fiber optic cable, rotating the cam to rotate the second support in a direction opposite to the direction that uniformly and repeatable tensions and positions the fiber optic cable.

11. (Original) A method for forming a refractive-index grating in a fiber optic cable as recited in claim 8, wherein the first portion of the fiber optic cable is secured to the first support with a first clamp.

12. (Original) A method for forming a refractive-index grating in a fiber optic cable as recited in claim 8, wherein the second portion of the fiber optic cable is secured to the second support with a second clamp.

13. (Original) A method for forming a refractive-index grating in a fiber optic cable as recited in claim 9, wherein the second support comprises a rotatable body portion integrally connected to a leg portion, the leg portion contacting the cam to rotate the second support.

14. (Original) A method for forming a refractive-index grating in a fiber optic cable as recited in claim 8, further comprising aligning a glass optical fiber portion of the fiber optic cable with an alignment mechanism provided between the first and second supports.

15. (Currently Amended) A method for calibrating a fiber optic cable tensioning and positioning apparatus having a first

support and a second support rotatable relative to the first support, comprising:

securing a first portion of the fiber optic cable to the first support;

securing a second portion of the fiber optic cable to the second support, said second support having a curved portion, a radius associated with said curved portion exceeding a bend radius of said fiber optic cable;

measuring a diffraction grating provided in the untensioned fiber optic cable;

creating a gravity-assisted moment arm with the second support to uniformly tension the fiber optic cable between the first and second supports;

measuring the diffraction grating provided in the uniformly tensioned fiber optic cable; and

comparing the measured diffraction grating of the untensioned fiber optic cable to the measured diffraction grating of the tensioned fiber optic cable to calculate the tension applied to the fiber optic cable.